P21584.A03

a user registration system that registers machine authentication data inherent to the IP connection terminal owned by a user and a calling code corresponding to a directory service server connected to the internet,

a waiting registration request system that sends a waiting request packet comprising a machine authentication data and a global IP address assigned by the provider from the IP connection terminal to the directory service server when the IP connection terminal as the receiving terminal is connected to the internet,

a waiting registration system that reads out the machine authentication data and the global IP address from the packet when the directory server receives the waiting request packet from the IP connection terminal and registering the global IP address as the current connection address in a predetermined memory area corresponding to the machine authentication data and the calling code thereof,

a destination address request system that sends a sending request packet demanding the notification of a global IP address corresponding to the calling code of the receiving IP connection terminal,

an IP address notification system that sends back the global IP address corresponding to the calling code of the receiving IP connection terminal recorded in the request packet to the sending IP connection terminal when the directory service server receives the sending request packet from the IP connection terminal, and

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a connection request system that sends the connection request packet to the global IP address from the sending IP connection terminal in accordance with TCP/IP when a global IP address corresponding to the calling code on the receiving side is sent back.

2. (Amended - Clean Copy) An IP connection communication system for establishing communication between each of a plurality of IP connection terminals, in which an IP connection terminal is assigned with a global IP address by a provider on every connection to an internet as a receiving terminal, the system comprising:

a user registration system that registers machine authentication data inherent to the IP connection terminal owned by a user and a calling code correspondingly to a directory service server connected to the internet,

a waiting registration system that reads the machine authentication data and the global IP address from a waiting request packet upon receiving a waiting request packet comprising the machine authentication data and the global data assigned by the provider from the receiving IP connection terminal, and registering the global IP address as the current connection address in a predetermined memory area corresponding to the machine authentication data and the calling codes hereof, and

an IP address notification system that sends back the global IP address corresponding to the calling code of the receiving IP connection terminal recorded in the packet to the

sending IP connection terminal when the directory service server receives the sending request packet from the IP connection terminal.

3. (Twice Amended - Clean Copy) An IP connection communication system as defined in claim 1, wherein a third layer data of the waiting request packet and the sending request packet contains a customer identification data for specifying a user and a machine identification data for specifying the IP connection terminal thereof as the machine authentication data, and

the waiting registration system and the IP address notification system of the directory service server are executed when the machine authentication data agrees with a previously registered user's machine authentication data.

4. (Amended - Clean Copy) An IP connection communication system as defined in claim 3, wherein

a LAN card connected in a wireless fashion with each of wireless LAN access points connected to the internet is attached to each IP connection terminal and

message access control address encrypted under a predetermined rule or the message access control address per se of the LAN card is contained in the machine identification data.

5. (Amended - Clean Copy) An IP connection terminal for establishing communication with another IP connection terminal assigned with a global IP address by a provider on every connection to an internet [(2)]in accordance with TCP/IP, the terminal comprising:

a waiting registration request system that sends a waiting request packet comprising authentication data and a global IP address assigned by the provider to a directory service server in which the calling code corresponding to the machine authentication data are previously stored and demanding registration of the global IP address corresponding to the machine authentication data and the calling data as the current connection address and

a calling system that calls another IP connection terminal in which the calling system comprises:

a calling code input system that inputs a calling code of the other IP connection terminal,

a destination address request system that sends a sending request packet demanding notification of the global IP address corresponding to the calling code inputted by the calling code input system to the directory service server,

a connection request system that sends a connection request packet to the global IP address in accordance with TPC/IP when the global IP address as the destination of the other

IP connection terminal is sent back from the directory service server in accordance with the

demand for the sending request packet.

6.   (Amended - Clean Copy)   An IP connection terminal for establishing

communication with another IP connection terminal assigned with a global IP address by a

provider on every connection to an internet in accordance with TCP/IP, the terminal

comprising:

a calling code input system that inputs a calling code of the other IP connection

terminal,

a destination address request system that sends a sending request packet demanding

notification of a global IP address corresponding to the calling code inputted by the calling

code input system to the directory service server, and

a connection request system that sends a connection request packet to the global IP

address in accordance with TPC/IP when the global IP address as the connection address of

the other IP connection terminal is sent back from the directory service server in accordance

with the demand for the sending request packet.

7. (Amended - Clean Copy) An IP connection terminal assigned with a global IP address by a provider on every connection to a internet upon communication by way of the internet in accordance with TCP/IP, the terminal comprising:

a waiting registration request system that sends a waiting request packet comprising a machine authentication data and a global IP address assigned by a provider to a directory service server in which a calling code corresponding to the machine authentication data is previously registered upon connection to the internet and demanding the registration of the global IP address corresponding to the machine authentication data and calling data as current connection address.

8. (Twice Amended - Clean Copy) An IP connection terminal as defined in claim 5, wherein

a LAN card connected in a wireless fashion to a wireless LAN access point is connected to the internet,

third layer data of the waiting request packet and the sending request packet contains the customer identification data for specifying the user and a machine identification data for specifying the IP connection terminal thereof as the machine authentication data, and the machine identification data contains an encrypted message access control address encrypted

under a predetermined rule from a message access control address or the message access

control address per se of the LAN card.

9. (Amended - Clean Copy) An IP connection communication system as defined in

claim 2, wherein a third layer data of the waiting request packet and the sending request

packet contains a customer identification data for specifying a user and a machine

identification data for specifying the IP connection terminal thereof as the machine

authentication data, and

the waiting registration system and the IP address notification system of the directory

service server are executed when the machine authentication data agrees with a previously

registered user's machine authentication data.

10. (Amended - Clean Copy) An IP connection communication system as defined

in claim 9, wherein a LAN card connected in a wireless fashion with each of wireless LAN

access points connected to the internet is attached to each IP connection terminal and

a message access control address encrypted under a predetermined rule or the message

access control address per se of the LAN card is contained in the machine identification data.

11. (Amended - Clean Copy) An IP connection terminal as defined in claim 6, wherein a LAN card connected in a wireless fashion to a wireless LAN access point is connected to the internet,

third layer data of the waiting request packet and the sending request packet contains the customer identification data for specifying the user and a machine identification data for specifying the IP connection terminal thereof as the machine authentication data, and the machine identification data contains an encrypted message access control address encrypted under a predetermined rule from a message access control address or the message access control address per se of the LAN card.

12. (Amended - Clean Copy) An IP connection terminal as defined in claim 7, wherein a LAN card connected in a wireless fashion to a wireless LAN access point is connected to the internet,

third layer data of the waiting request packet Pw and the sending request packet Ps contains the customer identification data for specifying the user and a machine identification data for specifying the IP connection terminal thereof as the machine authentication data, and the machine identification data contains an encrypted message access control address encrypted under a predetermined rule from a message access control address or the message access control address per se of the LAN card.